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10/584,463	06/06/2007	Rainer Daude	095309.57915US	3312
23911 7590 03/08/2010 CROWELL & MORING LLP INTELLECTUAL PROPERTY GROUP P.O. BOX 14300 WASHINGTON, DC 20044-4300				
EXAMINER				
DAGER, JONATHAN M				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/584,463

Applicant(s)

DAUDE ET AL.

Examiner

JONATHAN M. DAGER

Art Unit

3663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2007.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
4a) Of the above claim(s) 1-9 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 10-18 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/CD)
Paper No(s)/Mail Date 06 June 2007
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Specification

The specification is objected to. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

The Examiner respectfully requests the above mentioned section heading(s) be added to the specification filed 22 June 2006 to place said specification in better accordance with 37 CFR 1.77(b).

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 1a. Claims 10-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10 contains the phrase “manual operating means” in the claim language. This embodiment is supported throughout the specification (e.g. page 7 lines 7-20), and the claim language is subsequently treated under 35 USC 112, sixth paragraph. However, the specification fails to set forth the exact structure, or equivalent thereof, that corresponds to the claimed function.

"If the specification is not clear as to the structure that the patentee intends to correspond to the claimed function, then the patentee has not paid the price for use of the convenience of broad claiming afforded by 112, sixth paragraph but is rather attempting to claim in functional terms unbounded by any reference to structure in the specification. If one employs means-plus-function language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language. If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as

required by the second paragraph of section 112." See *Biomedino, LLC v Waters Technologies Corporation* (Fed Cir, 2006-1350, 6/18/2007).

Conversely, the exact structure and/or functional equivalents of the term "voice control means" is clearly outlined in the specification (page 7 lines 1-5). Thus, these claim limitations clearly fall within the bounds of 35 U.S.C. 112, 6th paragraph.

Subsequently, claims 11-18 are rejected to under identical grounds due to dependency and/or similar terminology.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2a. Claims 10-13, 17, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Mercier (US 2004/0117084).

Regarding claims 10, 12, and 17, as best understood, Mercier discloses a system that provides vehicle information to an occupant of a vehicle which comprises: electronic components including a processor, memory, and video display circuitry, the processor grouping the vehicle information into different systems of the vehicle that have sets of adjustable functions; a display having a screen, the processor controlling the display to display each set of

the adjustable functions for a particular system on a representative screen that displays the adjustable functions of a presently selected system and to supply pictorial representations of the adjustable functions, the pictorial representations containing one of interactive graphics and an interactive alphanumerical display that correspond to present states of the adjustable functions, the representative screens and pictorial representations stored in the memory; and inputs through which the adjustable functions are adjusted, the inputs including a haptic controller manipulated to select one of the adjustable functions and control a present state of the selected adjustable function. In this system, the electronic components receive signals from the inputs and transmit signals to the display indicating the present state of the controlled adjustable function on the representative screen displaying the presently selected system (para 0024).

Thus, it is disclosed a control system for a vehicle, comprising a screen display having a plurality of display areas for displaying entries into a menu structure having a plurality of menu levels.

Mercier discloses that dynamic screens permit the haptic controller to navigate through the screen while static screens do not permit controller activity and merely display information on the display 142. The Alps Logo screen (or other customized designed logo) will appear for a limited amount of time, five seconds, when the car is initially turned on. The functions are arranged such that there is minimal, if any, nesting of the functions into different screens requiring scrolling through these different screens. This is to say that rather than displaying a list of functions, having a desired function selected and accessed, which then leads to another list of functions to control with the previous list being erased, as in the prior art, the current embodiment uses pictorial information to display most, if not all, of the available functions

without having to scroll through different screens. Furthermore, as each screen may be accessed by a hotkey, there is no need to manipulate the main haptic controller to maneuver from one screen to another screen. Thus, rather than having to memorize a pattern of: manipulate the haptic controller up x times, right y times, down once, left once, to get from one desired sub-function in one function of one screen to another desired sub-function in another function of a different screen (or from one sub-function to the another of the same function) without on-screen help, as in the prior art, the operator merely pushes the appropriate hotkey and moves the main haptic controller in the x direction so that the desired function is outlined, manipulates it in the y direction so that the desired sub-function is highlighted, and rotates or pushes down on it so the desired adjustment is obtained. Furthermore, in the screens of the present embodiment, unlike that of the prior art, the haptic controller retains all of its degrees of freedom, that is, manipulating the haptic controller in all screens where multiple functions are available has some effect: permitting selection or control of a function or sub-function (para 0088).

Mercier discloses that menu keys may exist on the steering wheel or hotkeys on the console. The menu keys and hotkeys direct control of the first or second haptic controller to a desired function to be controlled. The menu keys and hot keys may be disposed adjacent to the first or second haptic controller, respectively. Switches may additionally be disposed on the steering wheel, the combination of switches replacing all stalk switches on a steering column connected with the steering wheel. The switches on the steering wheel may be arranged in a logically consistent format such that groups of switches having related functions are grouped together. The switches may control functions of the vehicle not controlled by either of the first and second haptic controllers. The first haptic controller may comprise a haptic wheel interface

having functions selected through rotation and activated through depressing the wheel interface (para 0009).

Thus, it is disclosed a manual operating means for selecting and/or activating at least one entry on a current menu level in the menu structure, evaluating the current menu level, determining an intended control operation on the basis of the evaluation, and guiding the user through a “dialogue” wherein once an option is selected, the user is guided through various activated submenus (for example, see figs 8, 9A, 10A, 11A, etc.) to adjust the desired vehicle parameters (climate control, audio, etc.).

Mercier discloses that another object of the present invention to provide redundant mechanisms to decrease the possibility of driver error in manipulation and control of the various vehicle functions. Also, it is another object of the present invention to provide a display or graphical interface that displays interaction requirements between the operator and the haptic controller in an intuitive fashion. This gives the operator a series of options in an easily recognizable format on the display, represented as simulated mechanical controls of arranged in a logical sequence (para 0006).

Thus, it is disclosed that redundant methods can be used for the user to navigate through the menu.

In addition, a voice recognition system may be added to the above. Voice recognition systems have increased in power and versatility in the last few years and are generally well known, although the application in vehicle technology is limited, at best. The application of a voice recognition system, however, is likely to increase the safety of the control system by allowing the driver to control a desired function while not requiring the driver to either remove

his or her hands from the wheel or eyes from the road. Given the necessary processing requirements or voice recognition and limited space/cost constraints for vehicles, however, only a limited number of functions may be able to be controlled. In this case, the most accessed features (radio, CD, and climate control) are suitable candidates to provide voice recognition (para 0102). The outputs include an LCD or other comparable screen, tactile feedback, voice feedback redundancy, and the functional outputs (e.g. equipment outputs such as radio, climate control (HVAC), CD, wipers, turn signals, etc . . .) (para 0104).

Thus, it is disclosed a voice control means for redundantly selecting and/or activating at least one entry in the menu structure, wherein the voice control means evaluates the current menu level, determines the intended control operation, and after activation, starts a voice dialog ("voice feedback") associated with the determined intended control operations for selecting and activating more entries into the menu structure.

Regarding claims 11 and 18, Mercier discloses that given the necessary processing requirements or voice recognition and limited space/cost constraints for vehicles, however, only a limited number of functions may be able to be controlled. In this case, the most accessed features (radio, CD, and climate control) are suitable candidates to provide voice recognition (para 0102).

Thus, in the above combined citations it would be implicit to the invention of Mercier that the voice control means continuously determines the current menu level and/or the active display in the menu structure, as well as updating the screen display in response to the voice recognition dialog. In other words, the display/feedback features of Mercier continually provide

feedback via display and haptic/auditory means to assist the user in navigating through the various sub-menus necessary to alter the performance of the desired subsystem.

Regarding claim 13, as best understood, it is an inherent feature of voice recognition systems to accept incoming speech in a dialog and compare said speech to a predetermined voice input to interpret what was being stated by the user. Thus, Mercier inherently anticipates that which is claimed.

As to limitations which are considered to be inherent in a reference, see MPEP 2112.01.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3a. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mercier, as applied to claim 10 above, and further in view of Hiyokawa (US 5,825,306).

Regarding claims 14-16, as best understood, Mercier does not explicitly disclose wherein the voice control means outputs possible keywords for selection in a dialog step if it is detected multiple intended control operations.

Hiyokawa teaches navigation system according to the invention comprises, an input/output unit 1 for inputting and outputting information relating to route guidance, a present position detecting unit 2 for detecting information relating to the present position of a vehicle, an

information storage unit 3 for storing: (i) navigation data necessary for calculation of an optimal route, (ii) display guidance data necessary for calculation of an optimal route, and (iii) display guidance data necessary for guidance, and a central processing unit 4 for performing route search processing or display guidance processing necessary for route guidance and for controlling the entire system (column 3 lines 1-13).

The input/output unit 1 is provided with functions to input a destination, to instruct the central processing unit 4 to carry out navigation processing at the request of the driver so that guidance information can be inputted in voice and/or on screen when the driver needs such information, and to print out the data after the processing. As the means to fulfill the above functions, the input unit is provided with a touch switch 11 or an operation switch to input the destination data using telephone number or coordinates on a map or to request the route guidance. The output unit is provided with a display unit 12 for displaying inputted data on screen or for displaying route guidance automatically on screen at the request of the driver, a printer 13 for printing out the data processed by the central processing unit 4 and the data stored in the information storage unit 3, and a speaker 16 for outputting route guidance in voice.

In the case of voice activation, it is possible to add a voice recognizer used for recognizing an inputted voice and a card reader for reading data recorded on an IC card or magnetic card (column 3 lines 13-33).

Thus, it is taught a vehicle processing system similar to Mercier in which a display is used to guide a user through multiple menus for route guidance which can be used in a voice activation mode to interpret user choices.

FIG. 3 shows an alphabetical input screen. When the first character or the first letter "A" of the target name and the second character "B" are inputted, it is displayed on the screen that the subsequent characters and numerics following these two characters are limited to the characters and numerics "B, E, H, J, M, O, R, U, Y, 3, 4, 5, 6 and 7" as shaded on the screen. At the same time, the number of the remaining lists is displayed as "1234." Here, if the column "LIST" on the screen is pressed, all registered names having the shaded characters "AB" as the first two characters are displayed on the screen. Thus, it is found that the characters "ABCDEFGH" shaded on the screen represent the name of the target facility. When this is selected and inputted by key operation or by remote control operation, a map of the vicinity of the target facility is displayed on the screen. By key operation, it is also possible to return to the initial character input screen by reversing the above procedure, i.e. "map display screen" .fwdarw. "list display screen" .fwdarw. "character input screen". In case it is troublesome to search the aimed name on the display screen because there are a large number of remaining lists, the number of inputted characters should be increased. Then, the number of the remaining lists decreases. When the number of the remaining lists has decreased, the user can select the aimed target name from the displayed list on the screen. When the characters are inputted until there is only one list, the remaining name is selected and inputted automatically or by key operation, and a map of the vicinity of the aimed target is displayed. The characters can be inputted not only from the touch panel on the input screen but may be inputted by voice if a voice input unit is provided.

As described above, when the target name is inputted, the number of the remaining lists of target names including the inputted characters and numerics is displayed each time a character is inputted. By watching the number of the remaining lists, it is possible to judge whether the

number of the inputted characters should be increased or the list of target names should be displayed to select a name from the list. Thus, without inputting all of the characters of the target name, it is possible to select and input the aimed target name. This will eliminate much time and labor for inputting and extensively contribute to the convenience of the user.

FIG. 4 shows an example of a data structure of registered places for when the target name is inputted alphabetically. In this list, the registered names having the first character "B" and the second character "A" include the following names in all:

BADAPOZ, BADANAH, BAIKAL, BAQUBAH, BARCELONA, BARSTOW, BASEL, BASTAK, BASILAN, BATH, BATHURST, BAYERN (column 5 lines 4-53).

Taking an example of a case where it is wanted to input "BARCELONA" as the target name, when the characters "BA" are inputted, the number of remaining target names in the list is displayed as "12". Further, when the characters "BAR" are inputted, the number of remaining target names in the list is "2". Here, if the column "LIST" on the screen is pressed, the names "BARCELONA" and "BARSTOW" are displayed on the list. When the name "BARCELONA" is selected, a map of its vicinity is displayed. In this case, if the characters "BARC" are inputted, the number of remaining target names is 1. Then, the name "BARCELONA" is selected, and a map of its vicinity is displayed. Therefore, there is no need to input the nine characters of "BARCELONA", and inputting of 3 or 4 characters will suffice (column 5 lines 59-67, column 6 lines 1-6).

Lastly, it is taught Explaining now by taking examples in names of golf links, there are 12 golf links having a name with the word "Chiba" in the first portion of the name: "Chiba Isumi Golf Club", "Chiba Country Club Baigo Courage", "Chiba Country Club Kawama Course",

"Chiba Country Club Noda Course", "Chiba Green Park Country Club", "Chiba Kosaido Country Club", "Chiba Kokusai Country Club", "Chiba Shinnihon Golf Club", "Chiba Springs Country Club", "Chiba Central Golf Club", "Chiba Yomi-uri Country Club", and "Chiba Lakeside Country Club". The names of golf links usually have many characters and it takes considerable time to input. In this case, if golf links are selected by category-classified data, and the name "Chiba" is inputted, the number of registered target names remaining on the list is displayed as "12" because there are 12 golf links having the word "Chiba" in the first portion of the name. All these names are listed on the display, and the desired golf link name should be selected from them (column 8 lines 32-48).

Thus, it is taught a system and method of displaying multiple options to the user for selection in the event of a plurality of possible intended control operations.

Mercier has disclosed a base invention which is capable of all functions of the claimed embodiments, including guiding the user via a dialogue using manual or voice activated means to interpret a user's desired operation, and thus ultimately control a vehicle parameter. Where Mercier is deficient, with respect to claim 14 is that Mercier does not explicitly disclose presenting multiple options to the user if there are multiple options as a result of a possible intended control operation. Hiyokawa cures the deficiency in a similar invention.

Thus, since both inventions both disclose/teach similar elements and usage, it would have been obvious to one of ordinary skill in the art at the time of the invention to simply substitute one apparatus into the other, or at least combine their respective elements, to achieve no more than the predictable result of presenting multiple options in response to a seemingly ambiguous

control request. Doing so would provide for a decrease in time necessary and increased accuracy of the user's intended control operation.

Combining prior art elements according to known methods to yield predictable results is a rationale to support a conclusion of obviousness. See MPEP 2143(A).

Simple substitution of one known element for another to obtain predictable results will support a conclusion of obviousness. See MPEP 2143 (B).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JONATHAN M. DAGER whose telephone number is (571)270-1332. The examiner can normally be reached on 0830-1800 (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JD
02 March 2010

/Jack W. Keith/
Supervisory Patent Examiner, Art Unit 3663